DEFENSE ADVANCED RESEARCH PROJECTS AGENCY
ADVANCED TECHNOLOGY OFFICE (ATO)
PLANNED PROCUREMENTS
January 2000

PROGRAM DESCRIPTION	FUNDING	SCHEDULE	PROGRAM MGR
WOLFPACK: This program will develop technologies critical to a precision, distributed, tactical jamming/spoofing system and demonstrate a complete system in a series of field tests. This system will deny the enemy the use of radio communications throughout the battlespace by means of a network of air-emplaced, autonomous, ground-based monitors/jammers linked together to cooperate and avoid disruption of friendly military and protected commercial radio communications. Critical to the system architecture are: (1) the deployment means to obtain advantaged position for the low-cost, battery-power monitoring and jamming components; (2) signal classification and networking technology for the radio, jammer and SIGINT components; and (3) advanced antenna technology for the precision jammers.	$20M	BAA 3QFY00 Total program: 5 years	Dr. Mark McHenry ATO
Robust Passive Sonar: The intent of this program is to develop high-performance space/time adaptive processing (STAP) techniques to eliminate discrete surface shipping interference in passive and active acoustic systems. The principal goal is to generate significant additional performance at low frequencies in high-traffic coastal areas, where shipping effects strongly dominate the overall acoustic noise background. Secondary goals include: (1) identification of the salient characteristics of acoustic receive arrays needed to properly support the operation of the algorithms that evolve; (2) assessment and exploitation of the potential for external information to assist in the interference removal process; and (3) assessment of the extent of the approaches developed to enable improved sonar automation and longer system integration times. A data-driven algorithmic development and assessment program is planned to: (1) identify high-performance approaches for rejecting the complex noise background found at low frequencies in high-traffic littoral areas; (2) assess their individual performance and robustness; (3) integrate them into an end-to-end processing approach; and (4) assess the resulting overall performance to overtly manage interactions between the various components.	$40M	BAA/845 3QFY00 Total program: 4 years	CAPT John J. Polcari ATO

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Synthetic Aperture Sonar (SAS): SAS offers the potential for revolutionary improvements in mine detection, classification and identification. The goals of SAS program are to: (1) create robust end-to-end algorithms for generating one-inch resolution at 500 m; (2) determine and exploit via processing algorithms the high-resolution acoustic return structure from mines, particularly differentiating continuous return structures from discrete highlight structures; (3) assess the efficacy of high resolution for high-performance mine classification and identification; and (4) investigate employing wideband and vertical aperture approaches for higher speed operation. The effort will focus on a two-year program of data-driven algorithm development and test. The purpose of this program is to prove the readiness of SAS approaches for transition from R&D to acquisition. Supporting hardware for data collection will be developed, integrated, or borrowed as necessary to support the algorithmic goals.	$5M	BAA 2QFY00 Total program: 2 years	CAPT John J. Polcari ATO